

IN THE CLAIMS:

The following is a current listing of claims and will replace all prior versions and listings of claims in the application. Please amend the claims as follows:

1. (Currently Amended) ~~In an environmentally hardened network, a~~ A network system, comprising:

a first network device located outdoors and above ground, wherein the first network device is coupled to an AC power source and includes a first data connector and a first power connector;

an outdoor, above-ground cable, wherein the cable is greater than 100 meters in length and includes a first set of wires and a second set of wires within an outer sheath, wherein the cable is configured to carry data in a first section on the first set of wires, and wherein the cable is further configured to carry power on the second set of wires, in a second section parallel to the first section, wherein the cable includes, at a first end of the cable, a first connector that couples the first set of wires to the first data connector, and wherein the cable includes, at the first end of the cable, a second connector that couples the second set of wires to the first power connector, and wherein the cable includes, at a second end of the cable, a third connector coupled to the first set of wires and a fourth connector coupled to the second set of wires; and

a second network device coupled to the first network device via the cable, wherein the second network device includes a second data connector and a second power connector that are respectively coupled at the second end of the cable to the third and fourth connectors, wherein the second network device is configured to operate without a direct coupling to an AC power source;

wherein the second network device is configured to receive data and power from the first network device via the cable,

first end connectors, wherein a first one of the first end connectors terminates a first end of the first section and a second one of the first end connectors terminates a first end of the second section, the first end connectors configured to maintain adequate physical and electrical contact with a first node of said network over a range of operationally harsh

environmental conditions, wherein the first node is configured to couple to receive said data and said power via said first end connectors.

2. (Currently Amended) The network system according to claim 1, wherein said second set of wires ~~is section includes wiring of a gauge to supports current up to 60 amperes sufficient to supply a plurality of nodes of the network including the first node.~~

3. (Currently Amended) The system network according to claim 1[[2]], wherein said first set of wires ~~section of said cable~~ includes at least four ~~a plurality of~~ unshielded twisted-wire pairs configured to carry said data, wherein said first network device is configured to operate in a mode in which data is supplied to the second network device over two of the unshielded twisted-wire pairs in parallel.

4. (Currently Amended) The system network according to claim 3, wherein said cable ~~first section of said cable~~ further includes an insulating sheath surrounding said unshielded twisted-wire pairs.

5. (Currently Amended) The system network according to claim 4, further including a foil sheathing around said first set of wires ~~section~~ and said second set of wires ~~section~~ and further including a drain wire juxtaposed to said foil sheathing and disposed parallel to said first set of wires ~~section~~ and said second set of wires ~~section~~.

6. (Currently Amended) The system network according to claim 5, further including a suspension line bound to said cable and configured to provide stress relief for said cable.

7. (Currently Amended) The system network according to claim 4, further including:
a conduit that permits installation of optical fiber within the conduit before or after installation of the cable; ~~and~~
a sheath enclosing said conduit, said first section, and said second section.

8. (Currently Amended) The ~~system~~ network according to claim 7, wherein said conduit is of a pliant material having walls of sufficient rigidity to be self-supporting without collapsing.
9. (Currently Amended) The ~~system~~ network according to claim 3, further including:
physical layer transceivers and one or more clocks at the first network device node,
wherein the one or more clocks are configured to clock the physical layer transceivers at rates substantially lower than the rate given by a design specification for the physical layer transceivers.
10. (Currently Amended) The ~~system~~ network according to claim 9, wherein said transceivers are configured to operate over said unshielded twisted-wire pairs in full duplex switched packet transmission mode.
11. (Canceled)
12. (Currently Amended) The ~~system~~ network according to claim [[3]]1, wherein said first set of wires includes a plurality of unshielded twisted-wire pairs configured to carry data, the network further including:
physical layer transceivers at the first network device, node wherein said transceivers are configured to operate over said unshielded twisted-wire pairs in full duplex switched packet transmission mode.
13. (Canceled)
14. (Currently Amended) The ~~system~~ network according to claim 1, wherein the first and second end ~~end~~ connectors contain a protective contact dielectric gel within contact areas of the first and second end ~~end~~ connectors.
- 15-16. (Canceled)

17. (Currently Amended) A cable, comprising:
- a first section including at least four unshielded twisted-wire pairs configured to carry data between first and second network devices coupleable to opposing first and second ends of the cable;
 - a second section including at least a pair of insulated wires configured to carry power from the first network device to the second network device;
 - a first connector that terminates the first ~~portion~~ section at the first end of the cable;
 - a second connector that terminates the second ~~portion~~ section at the first end of the cable;
- and
- a weather-resistant outer sheath surrounding at least the first section and the second section;
- wherein the cable is greater than 100 meters in length.
18. (Currently Amended) The cable of claim 17, further comprising:
- a tube configured to permit installation of an optical fiber in the tube before or after installation of the cable, wherein the tube is also surrounded by the outer sheath.
19. (Previously Presented) The cable of claim 18, wherein the tube includes a messenger wire to support installation of the optical fiber.
20. (Previously Presented) The cable of claim 17, wherein the second section also includes a ground return line.
21. (Currently Amended) The cable of claim 17, further comprising:
- a foil shield surrounding the first section and the second section but within the outer sheath; and
 - a drain wire.
22. (Currently Amended) The cable of claim 17, further comprising a removable strain cable.

23. (Currently Amended) A network, comprising:
a first node including a data connector and a power connector; and
a cable greater than 100 meters in length, wherein the cable includes[[ing]]:
a first portion configured to carry data, wherein the first portion includes at least four unshielded twisted pairs of wires (UTPs);
a second portion configured to carry power, wherein the second portion includes at least two insulated wires;
a weather resistant outer sheath surrounding at least the first and second portions;
a first connector that terminates the first portion and a second connector that terminates the second portion, wherein the first and second connectors are located at a first end of the cable;
wherein the first connector is coupled to the data connector, and wherein the second connector is coupled to the power connector.
24. (Previously Presented) The network of claim 23, wherein the first node includes a first pair of physical layer transceivers configured to send and receive portions of said data over the UTPs.
25. (Previously Presented) The network of claim 24, wherein the first node also includes a switch circuit and a plurality of pairs of physical layer transceivers including said first pair, wherein the switch is configured to selectively connect different ones of said pairs.
26. (Previously Presented) The network of claim 23, wherein the first node includes a router.
27. (Previously Presented) The network of claim 23, wherein the first node includes a power supply configured to provide said power for the second portion of the cable.

28. (Previously Presented) The network of claim 23, wherein the first node includes a switch and a power control coupled to the switch, wherein the power control is configured to control provision of said power from the power supply to the second portion of the cable based on commands received from the switch.

29. (Previously Presented) The network of claim 28, wherein the first node includes a power bus configured to receive said power from the power control and provide at least a portion of said power to said second portion of the cable, wherein the power bus is also configured to provide transient voltage protection for the second portion of the cable.

30. (Previously Presented) The network of claim 23, wherein the first and second connectors and the power and data connectors have plugs and receptacles that interlock with a secure mechanical clasping mechanism.

31. (Previously Presented) The network of claim 23, wherein the first and second connectors and the power and data connectors have protective housings that shield contact surfaces from dirt, moisture and EMI.

32. (Currently Amended) A ~~cable, system~~ comprising:

an outer sheath that includes:

~~[[a]] first means for carrying data from a first end to a second end of the cable;
and power, wherein the first means comprises:~~

~~second means for carrying power from the first end to the second end of the
cable connecting the first means to a data connection; and~~

~~wherein the cable is greater than 100 meters in length.~~

~~third means for connecting the first means to a power connection; and
a fourth means for sending and receiving data through the first means and for sending
power to a node of a network through the first means.~~

33-39. (Canceled)

40. (New) The network of claim 1, wherein the second set of wires includes shielded 10 to 16 gauge wires.

41. (New) The network of claim 1, wherein the second set of wires are within a coaxial cable inside the outdoor, above-ground cable, wherein the coaxial cable is of sufficient gauge in the center conductor to support currents as high as 60 amperes.

42. (New) The network of claim 1, wherein the second network device is an aerial switch connected to one or more customer premises.

43. (New) The network of claim 1, wherein the first network device is coupled to a fiber backbone.

44. (New) The network of claim 1, wherein the first network device includes a power conditioner unit coupled to the AC power source, wherein the power conditioner unit is configured to receive AC power from the AC power source, perform filtering, and provide conditioned AC power to a power supply within the first network device.

45. (New) The cable of claim 17, wherein the at least a pair of insulated wires in the second section can support current up to 60 amperes.
46. (New) The cable of claim 17, wherein the at least a pair of insulated wires are 10 gauge to 16 gauge wires.
47. (New) The cable of claim 17, wherein the second section includes a coaxial cable that includes the at least a pair of insulated wires, wherein a center conductor is of sufficient gauge to support current up to 60 amperes.
48. (New) The network of claim 23, wherein the second portion includes a coaxial cable.
49. (New) The network of claim 23, wherein the at least two insulated wires in the second portion are 10 to 16 gauge wires.
50. (New) A cable, comprising:
a first section including unshielded twisted-wire pairs configured to carry data between first and second network devices coupleable to opposing first and second ends of the cable;
a second section including at least a pair of insulated wires configured to carry power from the first network device to the second network device, wherein the at least a pair of insulated wires are between 10 and 16 gauge wires;
a first connector that terminates the first section at the first end of the cable;
a second connector that terminates the second section at the first end of the cable; and
an outer sheath surrounding at least the first section and the second section.
51. (New) The cable of claim 50, wherein the cable is greater than 100 meters in length.
52. (New) A power and data distribution cable, comprising:
a first section including unshielded twisted-wire pairs configured to carry data between first and second network devices coupleable to opposing first and second ends of the cable;

a second section including a coaxial cable configured to carry power from the first network device to the second network device, wherein a center conductor of the coaxial cable is of sufficient gauge to support current up to 60 amperes;

a first connector that terminates the first section at the first end of the cable;

a second connector that terminates the second section at the first end of the cable; and

an outer sheath surrounding at least the first section and the second section.

53. (New) The power and data distribution cable of claim 52, wherein the power and data distribution cable is greater than 100 meters in length.